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# The local roots of ‘health for all’: Primary health care in practices, 1950s–2000s

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## ABSTRACT

We look at Universal Health Coverage (UHC) through a historical investigation of the “health for all by 2000” policy adopted by the WHO in 1978. Within contemporary debates on access to care, Alma Ata is usually considered as a brief moment of well-intentioned utopia, which buckled to global health’s agenda of performance metrics and targeted diseases. Such visions of primary health care (PHC) are shared references in the debates about UHC. Aiming at a less geopolitical and more local approach of the strategy’s roots than the existing historiography, the paper draws from historical and ethnographic work on health policies and practices in Tanzania, Oman and Kerala (India), in which PHC was not only envisioned, but constructed as the backbone of local health systems, often prior to Alma Ata. All three states were praised for their PHC achievements. Studying them allows for emphasizing the importance of national trajectories in PHC, as well as revealing shared core issues such as the importance of access and affordability, of the focus on rural centers and the mass training of non-medical personnel, and of the articulation of vertical programs and horizontal system building. It also reveals very different trajectories in terms of duration, priorities, outcomes and international visibility.

This paper looks at Universal Health Coverage (UHC) by proposing a historical re-investigation of the “health for all by 2000” policy and the associated primary health care (PHC) strategy that the World Health Organization (WHO) officially adopted in 1978 at the Alma Ata conference. It is indeed not before the 2010s that UHC started to rise in the international health vocabulary, thus displacing the persistent reference to PHC. Within the contemporary debates on access to care, PHC is usually considered as a brief moment of well-intentioned utopia, which could hardly resist global health’s agenda of performance and targeted diseases. Historians have somehow reinforced this vision as they focused on events within and around the WHO, describing PHC as a policy of rights and needs, a form of social medicine rooted in the rise of the Third World and the role of the state as an agent of development (Chorev, 2012; Cueto et al., 2019). Therefore, PHC became a utopia projected into the past, incompatible with the new neo-liberal world order. Such visions of PHC are shared references in the debates about UHC, emphasizing a policy of access focusing on financing mechanisms — rather than on the organization of services or the infrastructures of care.

This paper argues that current understandings of PHC stand at odds

with many aspects of its history and what was discussed in the 1960s and 1970s when instantiations of PHC flourished, and when the joint WHO/UNICEF strategy emerged. Contemporary ideas of PHC are products of a retrospective vision, starting to take shape concurrently from 1978 with the attempts to implement the strategy. Alma Ata was not the beginning of the PHC strategy; instead, it was the beginning of its end and of its replacement by forms of utopias projected into the past, which stabilized in the 1990s and 2000s along with the hegemony of global health.

The WHO’s primary health care strategy occupies a peculiar place in the historiography of health and medicine for two reasons. First, it has focused on events at the international level, i.e., on the WHO headquarters in Geneva and Alma Ata, on the geopolitics of the Cold War and on the rise of the Third World. Second, it has constructed a narrative of the strategy as the embodiment of social medicine for the Global South, whose fate was sealed in the late 1980s by the neo-liberal turn in international affairs, with its cortege of structural adjustments and selective (vertical) programs.

Aiming at a less geopolitical and more practical approach of the roots of the strategy, the paper focuses on associated policies and practices in

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three different national/regional settings — Tanzania, Oman and Kerala (India), where PHC was not only envisioned, but constructed as the backbone of local health systems. These three states were praised in international arenas for their PHC achievements. Studying them reveals very different trajectories in terms of duration, priorities, outcomes and international visibility, but also highlights shared core issues such as the importance of access and affordability, the focus on rural centers and the mass training of non-medical personnel, or the articulation between vertical programs and horizontal system building.

For these case studies, we draw on local and international public archives (mostly local archives) and oral history interviews, with the private documentation of many of our interviewees kindly made available. In addition, about Oman, we use data from episodic ethnographic fieldwork (Whyte, 2013) conducted over the last two decades about health by C. Beaudevin, and on the analysis of the Omani Ministry of Health's reports (from 1972 to the 2010s). The case of Kerala has been discussed at length by development experts in the late 1990s and early 2000s; here, we mostly use the archives of the state's health secretary that we could (briefly) investigate in 2019 before COVID-19 postponed access. For Tanzania, we can build on a set of studies on the country's colonial and post-colonial health system development, and our own material collected in relation to the country's tuberculosis control.

By examining the strategies, targeted populations and tools of these three PHC instantiations, as well as their difficulties and legacy, we argue that the roots of Health for All reside more in the national practices of PHC than in the Cold War-laden geopolitical negotiations in Geneva. This approach allows for modifying the too-simple story of the shift from PHC to Selective Primary Health Care, and highlights some continuities of PHC into the global health era.

## 1. Primary health care and the development nation: the case of Tanzania

In the 1975 joint WHO/UNICEF study (Djukanovic et al., 1975), which summarized the evidence that was to go into the Alma Ata policy three years later, Tanzania was hailed for its achievements. More specifically, the report mentioned developing rural health through a network of local health centers and dispensaries, staffed with essentially trained Community Health Workers (CHW). In analyses, Tanzania's health services would be praised for their expansion in rural community health (Heggenhougen et al., 1987). However, such praise needs contextualization: it was intimately connected to the country's villagization policy, *Ujamaa*, which preceded the Alma Ata process; its successes were also short-lived. A few years after Alma Ata, we find reports about rapidly declining wages and work morale (Bech et al., 2013). By the 1990s, the situation had deteriorated as a result of structural adjustment policies, Tanzania's health system could now be summarized as “largely dysfunctional in much of the country” (Gerrets, 2015, 183). At the same time, it became the stage for trials that were the very opposite of PHC: technological, vertical, cost-effective disease control programs. With their high degree of outside funding, such programs paved the way for Tanzania to become a franchise state in global health days (Jennings, 2008).

How could a country be hailed as a lighthouse of PHC and its opposite with just 15 years in-between? The answer to this question lies in its health system history, in which the notions of present or projected development have figured highly. Rather than presupposing their close connection to PHC, the following pages discuss local lines of development that policies on rural health in the 1970s stemmed from. A synoptic perspective will be supplemented with empirical data from a specific field, tuberculosis control, which figured greatly for both Alma Ata supporters and their critics.

When the British took over Germany's colony Tanganyika after World War I, medical services were barely targeting the local population outside of disease eradication campaigns. In contrast to neighboring Kenya, Tanganyika attracted little research interest, not to speak of

investments into health services (Clyde, 1962). Outside of large coastal towns and flagship diseases, knowledge of the country's health status was anecdotal by today's standards. When surveyors wished to study tuberculosis in the territory around 1930, its very presence beyond coastal towns was unknown (Wilcocks, 1932/3). A high prevalence was particularly found in the north around Mt. Kilimanjaro.

Yet, in the middle of this colonial science enterprise, we find some elements of rural health, namely the training of health personnel from local communities. By the 1930s, local villagers would receive tuberculosis services in a small hospital below Mt. Kilimanjaro. In addition, there came so-called home visitors, who, through a web of dispensaries ran an outpatient treatment scheme (Davies, 1938), not unlike African medical auxiliaries during the same period in southern Rhodesia (Ncube, 2021). Probably owing to the surgical therapies used, treatment successes were largely absent. Still, the hospital became a center of training for medical staff. Their formal qualifications as assistants, orderlies or dressers may sound unimpressive, but upon closer inspection, they provided all the x-rays, laboratory work and small surgeries that the hospital needed (Tanzania National Archives, 1949).

World War II changed all this. It awakened the interest of the British in their so-far ignored mandate, driven by their interest to mobilize resources in support of the war effort. Backwardness, as it was previously labeled, now became underdevelopment (Westcott, 1986). Health was fairly low on the agenda, but the 1950s saw plans of a future health system being drafted (Bruchhausen, 2016). Significantly, these included a look at the training of health personnel at hospitals, missions and – a novelty – a dedicated school for nurses and medical officers in Dar es Salaam. There was even a plan drafted in 1956 that envisioned a comprehensive system of curative and preventive services, hospitals, public health offices and dispensaries, training institutions and more (Draft Plan, 1956) – all in a country where anyone who wished to train as a doctor still had to go abroad.

Returning to the hospital in the Kilimanjaro region, we find a steep rise in patient numbers during the 1940s that found its answer in a pronounced expansion – from 12 beds upon founding in 1926, to 300 by the late 1950s (Gordon, 1962; Ministry of Health and Labour, 1961). Significantly, the activities in training and outpatient treatment grew in parallel. Staff lists reveal a large number of qualified personnel. With the exception of one or two specialists, it was local, namely over 50 nurses, microscopists, medical assistants, attendants, etc (Tanzania National Archives, 1960). The hospital's outpatient treatment scheme continued. From about 1955, when effective drugs became available, it grew into a clinical trial on an outpatient treatment that reproduced, with modest means, the much-acclaimed MRC outpatient trials in Madras (McMillen, 2015). At the same time, Kibong'oto Hospital now provided clinical services to much of northern Tanganyika and consulting services to the entire country.

When it was approaching independence, Tanganyika had become a place that figured in late-colonial developments plans. Significantly, such plans aimed at a better balance of curative and preventive services, and at strengthening rural health. They also established a bridge between colonial rule and the independent government. A comprehensive analysis of health systems, ordered by the colonial government, was received by the government of an independent country. The analysis drew a picture that was far from revolutionary, and instead extended the developmental gaze, looking at Tanzania as an attractive stage for pursuing modest plans for strengthening preventive services and rural health, and aiming at integrating mission and state health services. The report did not suggest a substantial expansion of spending on health care, but instead aimed at a more comprehensive and centralized system. As poor as it was, Tanzania could grab an “opportunity to pioneer, develop and set standards of healthcare which could be an inspiration and an example for other independent nations” (Titmuss, 1964).

From studies on Tanzania's post-independence development, we know that like other independent states, the country did not initially depart much from the development plans drafted by the colonial

government (Green, 2014). Before the *Ujamaa* policy came into play, changes were of a more ideological nature. By famously summarizing Tanzania's historical mission as a fight against "poverty, ignorance and disease," the country's first president, Julius Nyerere, elevated development to the status of an ideology. In this development nation, agriculture and education stood first, while health followed. Health budgets did not increase in relative terms, and the agenda pursued was a function of the development agenda, focusing on education – the training of medical and public health officers – and on developing rural health (Beck, 1981). Given the extreme shortage of medical personnel and the instance that a medical school did not exist before 1963, the accent placed on training was barely a choice. What else was there to do for a population of over 10 million served by 400 biomedical physicians, a mere 12 of whom were Tanzanians (Bech et al., 2013)?

By the end of the 1960s, the picture was changing. Tanzania still had few physicians, but hundreds of medical and public health officers and other medical personnel, such as midwives and rural medical aides (Djukanovic et al., 1975; Heggenhougen et al., 1987, 28). A few years later, and now in conjunction with the *Ujamaa* policy, a large number of CHWs were added. In a sympathetic account, their numbers have been estimated to be over 2000 by 1982, most of them active through village health posts (Heggenhougen et al., 1987, 42/43). Their level of training seems to have varied quite a bit. Notably, there was a declared intention to deliver services in collaboration with traditional healers, birth attendants in particular (Heggenhougen et al., 1987, 133; Langwick, 2011, 121–147).

There was a gradual build up from an accent on rural health to the investment in CHWs. Even before the latter aroused international interest, Tanzania was viewed as offering inspiration on how to improve rural health care. When the WHO sent a consultant to evaluate the local tuberculosis services in 1967, the regional outpatient scheme run from Kibong'oto Hospital looked like an example of how specialized care could be organized outside of urban centers (World Health Organization, 1968). It was noted that the practice was not fully in line with principles outlined in 1966 by the future DG, Halfdan Mahler, who demanded that TB care should be on an outpatient basis, based on simple technology and delivered through the general health service (Mahler, 1966). Nevertheless, the report concluded it could provide an inspiration for how TB care in low-income countries could be organized. It recommended building a national program around a series of similar hospitals, acting as centers for regions.

In the following years, a reduced version of the plan was pursued, as the additional centers did not come into existence. Instead, the outpatient and consultant activity of the Kibong'oto Hospital was expanded to a degree that it might have covered up to 20% of the annual incidence of the disease in the country, a percentage that we can only estimate from those hospitals case files which survived (Kibong'oto Hospital Archive). However, this became an episode in a history of decline ensuing around 1980. After the breakup of the East-African Union and a short war with Uganda in 1979, a rapidly worsening economic crisis led to bankruptcy in 1985, ending Tanzania's experiment with African socialism. The degree to which the CHWs ever came to function as providers of primary care is matter of dispute. Notably, the relative government expenditure on health did not increase in the 1960s and 1970s. Even so, the share of health expenditures that went into rural districts seems to have doubled from 20 to 40% during the 1970s. In addition, the move to train and supply CHWs to village health posts created a uniform structure through regions, districts and villages. Not unlike *Ujamaa* at large, while working with local communities, it drove bureaucratization and centralization in parallel (Lyimo, 2001).

Whether CHWs ever lived up to the exemplary status attributed to them by the WHO is difficult to say (for past as well as contemporary attempts, such as the Zambian case discussed in this special issue Wintrup, 2022). Interviews with protagonists speak of high hopes at the outset, but also of declining wages and work morale, and increasing drug shortages over time (Bech et al., 2013). For all the discontinuity

intended, the CHWs also continued a trait in Tanzanian health history, namely a propensity for large-scale plans and experimentation, in which colonial administrators, Tanzanians or PHC enthusiasts would project visions of health system development upon the country.

In fact, the crisis of the 1980s saw yet another round of experiments, now using the existence of a fairly uniform health service in a bankrupt state as a venue to try out Selective Primary Health Care in an entire country. When the International Union for Tuberculosis (IUAT) from 1976 assisted in the creation of a National Control Program (NTLP) for tuberculosis control, existing PHC structures became re-utilized in a vertical control program (Gradmann, 2019). Praising "the potential of your country" (Tanzania National Archives, 1977), and paying lip service to the WHO's PHC principles, the IUAT created an externally funded control program, which after an initial phase, in which the prescribed cheap WHO drug combination was shown to be ineffective, went on to perform a country-wide trial of short-course chemotherapy from 1982. Rather than contributing, it leveraged existing regional and district health structures. In stark contrast to a country sinking into economic crisis, the IUAT ran a prototype of global health's islands of plenty, an isolated vertical control program that had no shortage of drugs or transport facilities, and commanded its own budget.

Fifteen years after being hailed in the WHO/UNICEF report, Tanzania had now become a stage for a trial of nascent global health. The WHO attempted to stop the enterprise, but had to buckle, as the IUAT trial was picked up by the World Bank as a showcase example of a cost-efficient disease control program (World Bank, 1993). It should be seen as the single most important source of inspiration for the drug-based control strategy for tuberculosis, DOTS, which was launched in the mid-1990s. While Tanzania served as a stage for such work, there was little room for local initiatives. In fact, it sealed the fate of the regional outpatient control scheme that we have previously encountered. In 1990, Kibong'oto was only a national hospital on paper. In practice, it had been reduced to delivering the same services as any other health facility that worked in the strict hierarchical system of the NTLP.

Tanzania had a considerable tradition of primary health care. But in contrast to Oman, which we will look at in the next section, it was not connected to Alma Ata policies. In predating them, it served as their inspiration, rather than drawing from it.

## 2. Primary health care with oil money and foreign professionals: the case of Oman

Some groves, a flowery irrigated roundabout, support a large marble structure bearing the arms of the royal family and "Ministry of Health" in Arabic. In the background is a large, sandy building with its façade partly concealed by tall concrete structures imitating a carved wood latticework. Until recently, this main entrance to the Ministry of Health (MoH) headquarters in Muscat, the Omani capital, was also the entrance to the country office of the World Health Organization (now a stone's throw away). Such proximity appears as a metaphor for the link between Oman and the WHO for the past 52 years. The WHO's Eastern Mediterranean Region's office (EMRO) website framed this collaboration as follows:

The WHO has provided technical support to Oman since [1970]. Since this time, the Health for All goal and the primary health care strategy have guided the WHO/government collaboration in the country. The most noteworthy successes resulting from this close collaboration include the development of an efficient primary health care system and relevant human resources for health [...]. (Eastern Mediterranean Region Office, 2016)

This section examines the case of Oman, which is an internationally cited example of PHC implementation, but with some notable features: a rich oil economy run by an authoritarian regime that actively excludes part of its population from the benefits of the welfare state.

In 1970, a new regime took power in Oman, following a coup and



during a civil war between the Sultan's army and guerillas aiming at creating a republic in the Arabian Peninsula. Apart from the military health services of both sides, trained health care workers were only present in some health centers, two missionary hospitals, the small British Consulate hospital in the capital and the hospital of the national oil company — for a total of approximately 250 beds (Netton, 1986). Providing health care everywhere was therefore one of the strategic pillars of the welfare state on which the new authoritarian regime was building its legitimacy (Valeri, 2018), as explained by its first minister of Health:

We were a new government, so people expected a lot from us; we had to do something, very quickly [...] people had to trust their leader. (Al-Jamali, 2008)

Oman swiftly applied for membership and joined the WHO in May 1971 (World Health Assembly, 1971). The regime then created a three-tiered health care system during the 1970s, based on an extensive PHC facilities network that is the focus of our inquiry.

The new government had to develop a biomedical health care system on quasi-empty grounds, in an international context of a “failure of conventional health services and approaches to make any appreciable impact on the health problems of developing populations” (Djukanovic et al., 1975). A strong emphasis on equitable access, especially according to Oman's complex topography, is readable in the first decisions and orientations of the policies. In 1970–71, the military supported the MoH to fly over the country and plot the observed dwellings on the maps of the national oil company, thus estimating the population by multiplying the number of households by an average number of five occupants (Al-Jamali, 2008). The governmental effort was clearly orientated towards building and staffing state-run health care institutions scattered throughout the entire territory, with PHC facilities, including health centers, extended health centers (with a delivery ward), polyclinics and local hospitals.

One of the first comprehensive annual health reports of the MoH states that “[t]he country is committed to the WHO global aim of Health for All by the Year 2000” (Ministry of Health, 1984). The 1983 annual statistical report features the main domains of intervention, divided into two distinct directorates: curative services and preventive medicine. The latter dealt at that time with the malaria control program, the expanded program of immunization, the national tuberculosis control program and the BCG vaccination.

The proximity between the MoH and the WHO is not simply empty talk, but clearly shows in the policies and funding allocations. From the early days of the Ministry onwards, several parallel endeavors tackled most of the PHC components as they appeared in the Alma Ata declaration: maternal and child care, available in health centers throughout the country; immunization, with the Expanded Program of Immunization (EPI), launched in 1981 and clearly following the WHO's recommendations; control of endemic diseases with trachoma and malaria control programs (which succeeded in eradicating the diseases) and the development of “public health compounds” in every region; the development of “curative services” through the extension of health centers and hospital networks and the creation of a Directorate of Education & Training within the MoH. However, two domains of Alma Ata are almost absent in the official Omani health publications of the 1970s–1990s: an essential drugs policy, probably because oil and gas revenues quickly allowed for massive drug imports, and traditional medicine. With regard to the latter, a plausible explanation lies in the close links between the new regime and modernity: the virtual absence of biomedical facilities before the 1970s made traditional medicine emblematic of this “past,” and the new biomedical system became evidence of the ruler's ability to move his country forward quickly. Traditional medicine is relatively widely practiced in Oman, but not publicly funded.

In addition to the Alma Ata ingredients, several important aspects that the WHO-UNICEF joint study on “Alternatives approaches to meeting basic health needs in developing countries” (Djukanovic et al.,

1975) and the “Health for All by 2000” strategy were also taken into account: the design of a national referral system and a focus on literacy, education and professional training (the College of Medicine opened in 1986). Among the numerous difficulties to be locally overcome mentioned in the WHO-UNICEF study, several were clearly tackled by an intensive approach to development, which included 5-year planning and the parallel development of key domains, such as education, health, administration, economy and transport.

In 1990, these policies combined for an economic growth that had visible results: the under-5 mortality rate dropped from 229 in 1970 to 39 per 1000 live births (World Bank, 2020), as the immunization coverage of under-5 children reached 96–99% (World Health Organization, 2020). In this context, the early 1990s featured major additional steps adhering to the WHO's PHC policies. In 1991, the MoH launched the decentralization of health affairs, and divided the country into 11 health governorates and 61 provinces; in 1992, it created the Community Support Group volunteers status (currently 3000 individuals, primarily women) and the 1996 Omani Basic Law, which in Article 12 acknowledged the role of the State regarding PHC, as “[caring] for public health and the means of prevention and treatment of diseases and epidemics [and endeavoring] to provide healthcare for every citizen.”

Besides its adherence to the WHO's policies, the heuristic value of the Omani case lies in its status of a widely hailed “PHC achiever,” since PHC reappeared as a strong focus in the WHO discourse. The WHO and contemporary global health actors, such as the Primary Health Care Performance Initiative (PHCPI), claim their hope that the sultanate will be emulated, and consider it to be an early example of Alma Ata in practice: going back to the current regime's ascendancy (and hence to the 1970s), thereby underlying the constant focus on PHC, and linking it with UHC (Ben Halim et al., 2019; World Health Organization, 2008a; b). The 2008 World Health Report featured Oman among its case studies, focusing on PHC achievements, praising it as “close to universal access to health care within a generation” (World Health Organization, 2008b). That same year in the *Lancet*, the authors write about PHC in Oman, Thailand, Brazil and Cuba that “Some countries have shown the way” (Rawaf et al., 2008). In the aftermath of the 2008 World Health Report, Margaret Chan (2012) stated that “Primary health care has given Oman extensive experience in health promotion and disease prevention. (...) Making health systems fit-for-purpose amidst the enormous health challenges of the 21st century is an extremely demanding task. Based on experience, Oman can do it, do it first, and do it best.”

The value of this exemplarity in the global health era is clearly detailed by the regional WHO office: “Oman is an attractive health system model to pilot global health strategies and initiatives by the WHO and other agencies” (Eastern Mediterranean Region Office, n.d.).

The above-mentioned 1975 WHO-UNICEF joint study features several case studies of countries whose approach the authors deem relevant. The text shows the variety of potential ways of “doing” PHC in practice. For example, Bangladesh is praised for an efficient reorganization; China for equity, with an emphasis on local self-reliance and a brief training of locally recruited personnel; Cuba for a strong community-involvement and its compliance with WHO recommendations; Tanzania for the decentralization of planning, among other things; and India, for its integrative approach of indigenous medicines. If this study had been conducted a few years later, it is highly likely that Oman would have been among the countries cited as an example. Despite the aforementioned international comments, it is relevant to look at the discrepancies between these countries and Oman. The Omani “recipe” for PHC implementation is indeed both different and partly concealed in at least four aspects, which makes its PHC policy incompletely aligned with the WHO's guidelines.

A first crucial known unknown about Oman's health system relates to its target population. The population structure includes a significant part of migrant workers (currently approximately 60%). As mentioned above, the early years of PHC practice are indeed not due to Omani grassroots doctors or trained villagers like in China, but instead to a

majority of non-Omanis physicians (e.g. in 1980, five Omani doctors vs. 94 non-Omanis (Ministry of Health, 1984)), nurses (mostly from Egypt and India, on temporary work visas) and a small number of Omani professionals born in East Africa. In addition, unless they work in public institutions, in selected private companies or for an employer who is willing to pay for their health expenses, non-Omani citizens have been excluded from accessing free health care. PHC in Oman is therefore ubiquitous but non-universal, and at odds with the Alma Ata declaration reference to social justice in the pursuit of Health for All by 2000.

Second, the state's expenses are not paid by the redistribution of taxes or contributions, but almost exclusively by oil and gas extraction money, i.e., via massive, internationally rarer, unreliable and questioned resources. The Omani case hence sheds a bright light on the silenced power of money in efficiently implementing PHC on a national level.

Third, another under-displayed aspect of the Omani society is the muzzling of civil society, which, when combined with governmental paternalism, explains the quasi-absence of citizen involvement in health policies until the 1990s. The creation of the PHC network was indeed a top-down process, despite the decentralization process launched in the early 1990s.

Lastly, we want to stress that Oman's intensive development took place against the backdrop of a peculiar relationship to the past. The continuum of modernization is framed in official historiography (and school textbooks) as the "renaissance" (*al-nahda*) of the nation, which is considered to have begun in 1970 following the long "night" from which Sultan Qaboos brought it out (Limbert, 2010). Development is thus filled with the nostalgia of a mythical golden era, aiming at restoring the country's aura. Innovations are conceived as offered by the Sultan: importing medical technologies is not seen as a result of insufficient Omani technicians or scholars, but as an important achievement of the regime, which provides its citizens with the best care without financial compensation.

In 2014, Omani officials claimed that the health care system ensured to 95% of Omanis the proximity of a primary health care center within a 5-km range (World Academy of Sciences, 2014) and in 2019, the number of hospital beds approached 4000 (100 times more than in 1970 for a population of 10,000) (Ministry of Health, 2020). Bearing in mind Oman's health system development and political specificities, we contend that the Sultanate is an early experiment of radical top-down primary healthcare in practice. However, it is also a case of non-universal coverage in the long term, and of disconnection between PHC unfolding and an increase of people's involvement. Oman has nonetheless been consistently praised for its PHC achievements in the last two decades, and considered as an "early-adopter" example to be followed, thereby participating in the crafting of PHC mythologies.

In contrast to this recognition, the Indian region of Kerala featured in the next section set up its primary health-care system, by mobilizing very different ingredients from the Omani situation, including limited funds, but a significant popular participation.

### 3. Primary health care without the strategy: the case of Kerala

For the historians of international health, Kerala is a fascinating anomaly, as it shows how a regional Indian state, responding to local constraints, invented a form of PHC including the core elements of the WHO strategy without many links to the WHO and the Geneva debates. It is also a fascinating anomaly for development experts, who labeled Kerala as a case of lopsided development. During the 40 years, from the late 1950s to the late 1990s, the state's rate of growth has been well below the rest of India, approximately 2% a year. Nonetheless, Kerala features major progress in terms of education, health, population control and land reform, thereby inverting the usual sequence relating growth and social development. Instead of the former providing the resources for the latter, the Kerala government invested in public services and redistribution (Drèze and Sen, 1996). The Kerala anomaly has therefore

attracted a wealth of analysis and comments, with a peak of international interest in the late 1990s (Parayil, 2000).

Vizhinjam is a small town in South Kerala, 12 km away from Thiruvananthapuram (formerly Trivandrum), the state capital. It concentrates the achievements and tensions underlying the so-called Kerala model of development. Vizhinjam is a Muslim fishing community. As such, it has not been a priority target of development policies. However, its primary health center is one of the oldest in Kerala State Archives, 1960-1963, and its trajectory reflects several waves of investments in such local centers and their various aims. When we visited Vizhinjam in November 2019 in search of local archives, we were told that the center was experiencing another episode of community mobilization for the expansion of its health infrastructure. A new building was under construction in order to open new delivery and consulting rooms for patients suffering from chronic illnesses and a palliative care unit. Most of the funding came from the *panchayat*, the local community government, through a mechanism called "participatory planning," which has been in place since the 1996 Kerala decentralization law.

Dispensaries, rural government dispensaries, public health centers, primary health centers, welfare centers ... The names of local Kerala health infrastructures kept changing until the late 1970s, when the reference to primary health care became stabilized. In contrast, the necessity to invest in such infrastructures, the reference to social development and local needs and community participation remain constant in the discourses of the political coalitions, which alternated in power since 1957 (respectively led by the Kerala Congress and the local communist party).

The state archives provide an abundant documentation about the long battle the Vizhinjam community waged between 1960 and 1974, in order to obtain an extension of the center with a ward dedicated to women's health, and a family planning unit. The division of labor for such operations involved the community, which would provide the land and building, and the state, which covered operating costs. As the local district medical officer explained, the Vizhinjam people were so poor that their part of the deal was beyond their means (Kerala State Archives, 1961). It took more than a decade to secure the administrative arrangements, and have the state order the construction of a new building and to staff the place. Local mobilization was the key to success with picketing, petitions to the department of health services, letters to the government secretary from the District Medical Officer, from the Block Development Committee, from the *panchayat* and from the locally elected member of the legislative assembly.

This lobbying started in 1960. Requests for action received no response beyond perfunctory notes, saying that the matter was receiving "government attention" until 1964. Then, one of the recurring Kerala political crises led New Delhi to suspend the legislative assembly, exert direct rule and drastically limit new operations. Things resumed in 1968 with the earmarking of construction funds but, in a typical bureaucratic move, the Director of Health Services did not plan the mandated acquisition of land for the next four years (Kerala State Archives, 1970, 1972). Meanwhile, the local situation and plans had changed. As the Vizhinjam medical officer explained in 1972: "The average daily outpatient attendance of this institution is 750. It is evident (...) that the present staff is quite inadequate to cope with the increasing volume of work. It is absolutely impossible for two assistant surgeons to attend to an average of 1000 patients a day, however smart and efficient they may be" (Kerala State Archives, 1972c). The new plan was therefore to use the acquired land to construct a 30-bed infrastructure with male and children wards, and staff it with a new assistant surgeon and eight new nurses (Kerala State Archives, 1973). Thanks to the renewed pressure of the community and its elites, the government relented. Construction of the local hospital finally started in 1974.

In view of the numerous files of the 1970s and 1980s associated with the construction of buildings and wards for five to 15 beds and demanding their staffing, the expectations of communities ran high. The Department of Health Services faced a regular flow of unsolicited

initiatives, many of which involved the support of local medical officers and/or the intervention of the local member of the Kerala legislative assembly. Even so, responses were not always positive; bureaucracy helped prioritize and, in contrast to what happened in Vizhinjam, cases were often closed in spite of protests from *panchayats* and district medical officers.

However important as they were, such ad-hoc trajectories did not preclude the performativity of state-level management. In 1972, a newly elected unified left government decided to open nothing less than 200 new dispensaries in blocks without medical facilities. The management of personnel figures prominently in the associated files showing how critical the question of labor was for a government, which saw state investments in health as the creation of public jobs as much as the creation of services. The basic structure of a local health unit was to include one physician (assistant surgeon), one nurse or midwife, one pharmacist or dispenser of drugs, one attendant and one sweeper (Kerala State Archives, 1972b). In addition to the purchase of furniture, equipment and medicines, paying and positioning the personnel was the responsibility of the state. However, in spite of claimed vacancies, the lack of qualified personnel, more than the lack of funds, proved the troubling factor in the conduct of the campaign (Kerala State Archives, 1972a). In the long run, training was the way out, and became one of the most visible outcomes of the Kerala PHC strategy with a definite prioritization of non-medical personnel.

As in Tanzania, the variety of cadres for non-medical personnel created during the 1960s and 1970s to work within the PHC units was indeed impressive, including health visitors, public health inspectors, family planning counselors, smallpox or BCG inoculators, TB inspectors, assistant malaria inspectors, assistant midwife nurses, assistant nurses, etc. Yet, nurses and their sub-specialties ran at the top on the list of priorities. Kerala was the second Indian state after Bengal, establishing a school in 1960 to train certified nurses to become *public health nurses*, whose roles were not clinical care, but instead the district-level organization of health education, home visits and disease control. The training lasted one year with an original curriculum, which included numerous topics beyond the obvious targets (maternal and child health and communicable diseases), with half the classes in nutrition, home management, mental health and psychology, health education techniques, social medicine and sociology (Kerala State Archives, 1960–1963). By the early 1980s, the number of schools, both public and private, training nurses in Kerala had increased in such a way that working abroad had become an important pattern of employment.

Health policy is not only about infrastructures, it is also about targeting specific and recognized health needs, which often take place through the selection of prioritized diseases and/or interventions. Very early on, PHC in Kerala resonated with a commitment to maternal and child health, with vaccinations and delivery by trained personnel looming high on the agenda. This provided the basis for an original alignment with international public health. The WHO does not seem to have ever been directly involved in Kerala's PHC policy, instead playing a role through the programs it supported at the central/national level. It hence seems that international programs endorsed by New Delhi, beginning with malaria and population control, have had a significant impact on the type of PHC Kerala developed since they resulted in the transfer of personnel associated with dedicated vertical units into the primary health centers throughout the 1970s. The WHO also acted as a partner of UNICEF, the primary UN organization supporting the development of local health centers in the 1960s and 1970s. As the history of the Vizhinjam center shows, assistance first took place in the form of a direct supply of equipment, including drugs, motor vehicles, refrigerators, microscopes and kerosene, as well as the supply of UNICEF-designed basic kits for children and maternal health (Kerala State Archives, 1964).

This does not imply that the Kerala state simply just provided the human infrastructure for programs and forms of medical care targeted elsewhere. In contrast to most national (and international) health

initiatives prior to the late 1970s, the policy of the state integrated Ayurveda in its plans for community health. By the early 1970s, this policy had expanded into a full-time commitment to the construction of a parallel system of Ayurveda dispensaries, district hospitals and medical colleges that mimicked the organization of “modern medicine,” which benefited from the same waves of investments, including the upgrading of dispensaries, into hospitals decided on in the 1980 annual plan (Kerala State Archives, 1980). Integration thus meant the juxtaposition of various PHC infrastructures, the modern one and those pertaining to the so-called Indian systems of medicine, meaning Ayurveda, but also homeopathy.

Even if bits and pieces of the regional strategy, like this experiment in the integration of non-biomedical practitioners, might have made their way to Geneva through UNICEF, the connection between the Kerala primary health experiment and Alma Ata remained loose and informal, pertaining to the widespread circulation of the Third World ideologies of socialism, development and planning. What was more specific was the after-effect of Alma Ata. The strategy nurtured health imaginaries in Kerala, e.g., becoming a mandatory reference for activists and strong advocates of PHC, like the People's Science Movement, in the 1980s.

However, the primary paradox of PHC development in Kerala is that when it became internationally visible in the 1990s, the model was actually facing a profound crisis (Isaac and Tharakan, 1995). Kerala was then confronted with the consequences of India's liberalization policy, and of a profound fiscal crisis. The period from 1985 to 2000 was actually associated with cuts in education and health services, a pattern favoring the use of the private sector (Sadanandan, 2001). The debates about public services then shifted to analyzing the deficiencies of the model. The background idea was that renewed growth was indeed indispensable since existing resources were sufficient to fulfill basic needs, but were insufficient to satisfy new aspirations and needs that two decades of social investments had raised.

Decentralization was the first political response. In the initial years of primary health care in Kerala, community participation had not been thought of in terms of the ability to make decisions regarding the organization of the centers, or the type of service provided. As the successive extensions of the Vinzhijam center illustrates, community participation was usually understood as participation in costs and maintenance. In the 1990s, the People's Campaign for Decentralized Planning led to the radicalization of participatory democracy by devolving planning and financial power to the *panchayats* (Parayil, 2000). Typically, projects were first proposed in neighborhood meetings; members of the *panchayat* and local technical staff (for instance the nurses) then helped turn them into proposals, which were voted upon during enlarged planning meetings. A second round of specifications followed with the intervention of the state's technical and financial services. In many places in Kerala, this mechanism greatly favored investments in health.

Although decentralization and participatory planning helped to bring in new resources from the communities, they did not solve the state-level financial crisis. The way out was only found with a new phase of economic growth boosted by the work of Kerala expatriates. In general, remittances now comprise one-third of Kerala's GDP. Although long-term investments in health and primary health care count among the historical roots for such an economic configuration, it can hardly be considered as a proof of the strength of the system.

#### 4. Conclusion

The historiography of the WHO's primary health care strategy left out the country-level analysis, as well as instantiations of primary health care, whether they took place before the years of intense debate within the WHO (1975–78), or after the derailment of the strategy in the mid-1980s.

The Tanzanian case features a countrywide experiment of PHC, which took place prior to the WHO's “Health for All” strategy itself.



Despite being widely praised in the running up to Alma Ata for its novelty, it also stood in a complicated relationship to health system development plans dating back to colonial times, as the outcomes were primarily targeted vertical programs, training programs and health infrastructures, which subsequently set the stage for the country to become a platform for clinical trials within the global health era.

The Omani way of doing PHC occurred later; it took off at the same time as Alma Ata, and has continued to expand since then. Official Omani literature on PHC often refers to WHO principles, and in a mirror image, the WHO has praised the Sultanate's PHC policies. Unlike Kerala, and contrary to the WHO strategy, the Omani government did not favor community involvement — not even in the technocratic meaning — in the very top-down development of its health system. Its distinctive feature is the permanent comprehensive nature of its PHC, which did not turn into Selective Primary Health Care.

In manifold ways, Kerala is the opposite of the Tanzanian case. Not only did this Indian state launch its PHC policies before the WHO strategy was even conceptualized, it maintained it during the PHC era and beyond. Nonetheless, it is barely mentioned in the WHO literature. This local invention also significantly departed from the WHO's PHC strategy in two domains. First, the ways in which communities were involved in the shaping of PHC in Kerala: the focus on a democratic approach to the political triage of health needs contrasts with the WHO approach, in which "community" primarily remained the technocratic view on a local scale (McDowell et al., 2022). Second, it included the creation of a parallel infrastructure for Ayurveda, which was envisioned as an integral part of the health system in response to both the community demands and incentives of New Delhi.

With the three case studies selected for this paper, we argue that these instantiations were important, and that taking into account their existence and their trajectories in a more serious way challenges the prevailing narrative on four different levels: 1) nation-wide instantiations of PHC took place earlier and – in some instances – developed independently of any WHO connection; 2) these initiatives did not aim at "all health for all," but were highly prioritized ventures even if they did not pursue the kind of medico-economic logic the northern promoters of selective PHC advocated; 3) local PHC very often blurred the binary opposition between horizontal and vertical programs, and 4) these programs and/or strategies did not disappear after the mid-1980s, and eventually became the ingredients of global health.

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## Credit author statement

Claire Beaudevin: Conceptualization, Methodology and investigation for the Oman case, Writing- Original Draft, Writing – review & editing; Jean-Paul Gaudillière: Conceptualization, Methodology and investigation for the Kerala case, Writing- Original Draft, Writing – review & editing, Funding acquisition; Christoph Gradmann: Conceptualization, Methodology and investigation for the Tanzania case, Writing- Original Draft, Writing – review & editing, Funding acquisition

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## References

- Al-Jamali, A., 2008. Interview, November 2008, Muscat. Conducted by R. 1.
- Bech, M.M., Lawi, Y.Q., Massay, D.A., Rekdal, O.B., 2013. Changing policies and their influence on government health workers in Tanzania, 1967–2009: perspectives from rural mbulu district. *Int. J. Afr. Hist. Stud.* 46, 61–103.
- Beck, A., 1981. *Medicine, Tradition, and Development in Kenya and Tanzania, 1920–1970*. Crossroads Press, Waltham, Mass.
- Ben Halim, L., Alajmi, F., Al Lamki, S., 2019. Ensuring Universal Access to Primary Health Care in Oman. The Primary Health Care Performance Initiative.
- Bruchhausen, W., 2016. From precondition to goal of development. *Health and medicine in the planning and political conflicts of British Tanganyika Territory*. In: Joseph, M. H., Gerald, H., Martina, K. (Eds.), *Developing Africa: Concepts and Practices in Twentieth-Century Colonialism*. Manchester University Press, Manchester: Manchester, pp. 207–221.
- Chan, M., 2012. WHO Director-General Addresses Conference on Health Systems. World Health Organization.
- Chorev, N., 2012. *The World Health Organization between North and South*. Cornell University Press, Ithaca and London.
- Clyde, D.F., 1962. *History of the Medical Services of Tanganyika*.
- Cueto, M., Brown, T.M., Fee, E., 2019. *The World Health Organisation: A History*. Cambridge University Press, Cambridge.
- Davies, H.N., 1938. The work of a tuberculosis unit in East africa. *Tubercle* 20, 76–88.
- Djukanovic, V., Mach, E.P., World Health Organization, & United Nations Children's Fund, 1975. *Alternative Approaches to Meeting Basic Health Needs in Developing Countries: a Joint UNICEF/WHO Study*. World Health Organization, Geneva.
- Drèze, J., Sen, A., 1996. *India: Economic Development and Social Opportunity*. Oxford University Press, New Delhi.
- Eastern Mediterranean Region Office, 2016. Oman - Programme areas.
- Gerrets, R., 2015. International health and the proliferation of "partnerships": (Un) Intended boost for state institutions in Tanzania? In: Geissler, P.W. (Ed.), *Para-states and Medical Science: Making African Global Health*. Duke University Press, Durham, N.C., pp. 179–206.
- Gordon, C.G.I., 1962. The tuberculosis situation in an area of Tanganyika, following a five year period of prevention and treatment. *Tubercle* 43, 43–54.
- Gradmann, Christoph, 2019. *Treatment on Trial: Tanzania's National Tuberculosis Program, the International Union against Tuberculosis and Lung Disease, and the Road to DOTS, 1977–1991*. *J. Hist. Med. Allied Sci.* 74, 316–343.
- Green, M., 2014. *The Development State: Aid, Culture and Civil Society in Tanzania*. Woodbridge: James Currey.
- Heggenhougen, K., Vaughan, P., Muhondwa, E.P.Y., Rutabanzibwa-Ngaiza, J., 1987. *Community Health Workers: the Tanzanian Experience*. Oxford University Press, Oxford.
- Isaac, T., Tharakan, M., 1995. Kerala towards a new agenda. *Econ. Polit. Wkly.* 30, 1993–2004.
- Jennings, M., 2008. *Surrogates of the State: NGOs, Development, and Ujamaa in Tanzania*. Conn: Kumarian Press, Inc, Bloomfield.
- Kerala State Archives, 1960–1963. D.o.H.S. (1960–1963). File PE 46336. School of Public Health Nurses.
- Kerala State Archives, 1961. File PL2-55330, Letter of the Trivandrum District Medical Officer, 26/10/61.
- Kerala State Archives, 1964. File MCH4-41530, Letter Unicef Field Representative (Hyderabad) to DHS Regarding Primary Health Centers Qualifying for Unicef Equipment, Supplies and Transport, 19/5/64.
- Kerala State Archives, 1970. File PL2-55330, Kottayam Administrative Medical Officer to DHS, 1972, 4/6/70 and 28/2/72.
- Kerala State Archives, 1972a. File P&E-45425/1972. Kottayam District Medical Officer to DHS, 31/37/72.
- Kerala State Archives, 1972b. File P&E-45425/1972, Memo « Scheme for Setting up Dispensaries in Panchayat Areas », 1/7/72.
- Kerala State Archives, 1972c. File PL2-55330. Vinzhijam Medical Officer to DHS, 6/7/72.
- Kerala State Archives, 1973. File PL2-55330. Kottayam Administrative Medical Officer to DHS, 3/7/73.
- Kerala State Archives, 1980. File PL6-55231, Letter Director of Indian Systems of Medicine to State Health Secretary, 13/5/80.
- Kibong'oto Hospital Archive. Sanya Juu, Tanzania.
- Langwick, S.A., 2011. *Bodies, Politics, and African Healing: the Matter of Maladies in Tanzania*. Indiana University Press, Bloomington, Indiana.
- Limbert, M.E., 2010. In: *The Time of Oil. Piety, Memory, and Social Life in an Omani Town*. Stanford University Press, Stanford.



- Lyimo, B.A., 2001. From Smallpox to AIDS : Public Health Services at Grassroots Levels in Tanzania (1955-1995). Centre for International Health, University of Bergen Institute for Nutrition Research, University of Oslo, Bergen,Oslo.
- Mahler, H., 1966. The tuberculosis programme in the developing countries, 1966 Bull. Int. Union Tuberc. Lung Dis. 37, 77–82.
- McDowell, A., Ruault, L., Fiorilli, O., Pordié, L., 2022. Localization in the Global. In: Gaudillière, J.-P., McDowell, A., Lang, C., Beaudevin, C. (Eds.), *Global Health for All. Knowledge, Politics, and Practices in Global Health*. Rutgers University Press, New Jersey/New Brunswick, pp. 29–55.
- McMillen, C.W., 2015. *Discovering Tuberculosis: A Global History, 1900 to Present*. Yale University Press, New Haven.
- Ministry of Health, 1984. Annual Health Report. Ministry of Health, Muscat, Oman.
- Ministry of Health, 2020. Annual Health Report 2019. Ministry of Health, Muscat, Oman.
- Ministry of Health and Labour, 1961. Annual Report of the Health Division/Tanganyika. Dar es Salaam.
- Ncube, G., 2021. Medi-caring on the colonial margins: the position of african medical assistants in rural colonial fort Victoria, southern Rhodesia, 1930s-1960s. *J. South Afr. Stud.* 47, 645–662.
- Netton, I.R. (Ed.), 1986. *Arabia and the Gulf: from Traditional Society to Modern States*. Barnes and Noble Books, Totowa.
- Parayil, G. (Ed.), 2000. *Kerala: the Development Experience*. Zed Books, New York.
- Rawaf, S., De Maeseneer, J., Starfield, B., 2008. From Alma-Ata to Almaty: a new start for primary health care. *Lancet* 372, 1365–1367.
- Sadanandan, R., 2001. Government health services in Kerala? Who benefits? *Econ. Polit. Wkly.* 36, 3071–3077.
- Tanzania National Archives, 1949. MoH, ACC 450, 1481/13, Annual Report Kibongoto 1949.
- Tanzania National Archives, 1960. MoH ACC450 2448 HEH 64.2 Kibongoto Hospital 1976-77, Staff List 16.6.1960.
- Tanzania National Archives, 1977. MoH HED 140.1 Tb Policy 1977-1978, Rouillon (UAT) to Mahimo, 10.3.1977.
- Titmuss, R.M., 1964. *The Health Services of Tanganyika: A Report to the Government*. Pitman, London.
- Valeri, M., 2018. *Oman. Politics and Society in the Qaboos State*, second ed. New York: Hurst/Columbia University Press, London.
- Westcott, N., 1986. The impact of the second world war on Tanganyika, 1939-1949. In: Killingray, D., Rathbone, R. (Eds.), *Africa and the Second World War*. Macmillan, London, pp. 143–159.
- Whyte, M., 2013. Episodic fieldwork, updating, and sociability. *Soc. Anal.* 57, 110.
- Wilcocks, C., 1932/3. The problem of tuberculosis East africa. *East Afr. Med. J.* 9, 88–89.
- Wintrup, James, 2022. Health by the people, again? The lost lessons of Alma-Ata in a community health worker programme in Zambia. *Social Science & Medicine*. <https://doi.org/10.1016/j.socscimed.2022.115257>. In this issue.
- World Academy of Sciences (The), 2014. In: *Oman, Transforming Health Care*. TWAS.
- World Bank, 1993. *World Development Report 1993: Investing in Health*. World Development Report: Oxford University Press Incorporated.
- World Bank, 2020. Mortality Rate, Under-5 (Per 1,000 Live Births) - Oman.
- World Health Assembly, 1971. Twenty-fourth World Health Assembly, Geneva, 4-20 May 1971: Part I: Resolutions and Decisions: Annexes. World Health Organization, Geneva.
- World Health Organization. (1968). WHO Archive, AFR/TB/100, Recommendation for a National Tuberculosis Programme in Tanzania..
- World Health Organization, 2008a. *Primary Health Care in Action. Country Examples: Oman*. WHO.
- World Health Organization, 2008b. *World Health Report. Primary Healthcare, Now More than Ever*. WHO, Geneva.
- World Health Organization, 2020. *WHO Vaccine-Preventable Diseases: Monitoring System. 2020 Global Summary - Oman*. World Health Organization.